

South Dakota State Plan for Heart Disease and Stroke



July 2009



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Secretary of Health

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Photo Courtesy SD Tourism



**OFFICE OF THE
SECRETARY**

600 East Capitol Avenue
Pierre, South Dakota 57501
(605) 773-3361

Dear South Dakotans:

I am pleased to share with you South Dakota's first ever Heart Disease and Stroke State Plan. It was developed by a diverse, dedicated group of professionals who share the vision of working to lessen the burden of heart disease and stroke for the residents of our state.

Heart disease and stroke are the first and third leading causes of death for men and women in all racial and ethnic groups in South Dakota and the nation. The impact of heart disease and stroke is felt in many different ways – healthcare costs associated with acute treatment, long-term illness, and disabilities that affect the economic future of the state, as well as the financial and emotional impact on patients and their families.

There is a place for all of us in the Heart Disease and Stroke State Plan, from health systems and healthcare providers to communities, public agencies, private organizations, business and individuals. I urge you to find the areas of this plan where you can become involved and work with us to make a difference in the lives of South Dakotans affected by heart disease and stroke.

Thank you to the American Heart Association for their partnership in bringing together the stakeholders and their assistance in the development of this plan. The plan and the work ahead would not be possible if not for the dedicated stakeholders who helped shape the vision for the work of heart disease and stroke prevention, screening and treatment.

Now the work of implementation begins, and I invite you to join in this effort.

Sincerely,

A handwritten signature in black ink, reading "Doneen B. Hollingsworth". The signature is written in a cursive style.

Doneen B. Hollingsworth
Secretary of Health



INTRODUCTION

The South Dakota State Plan for Heart Disease and Stroke serves as a call to action to all South Dakotans to do their part to prevent heart disease and stroke through public and professional education with the intention of empowering individuals and communities to adopt healthy lifestyle behaviors and build skills to initiate environmental and policy change strategies.

The *South Dakota State Plan for Heart Disease and Stroke* is the result of a collaborative project led by the South Dakota Department of Health and the American Heart Association.

It is the first document of its kind with a heart disease and stroke focus in South Dakota.

A diverse, dedicated group of professionals from across the state came together and constructed, reviewed and revised specific goals, objectives and strategies related to primary and secondary prevention of heart disease and stroke for South Dakota.

The resulting Plan will serve as a working document to guide our combined efforts for years to come, with the understanding that as the needs of South Dakota citizens change, so will this document.

Heart disease and stroke are the first and third leading causes of death in both South Dakota and the United States.

These statistics are true for both men and women in all racial and ethnic groups. The risk of heart disease and stroke can be reduced by taking steps to prevent and control the risk factors that put people at greater risk for heart disease, heart attack and stroke.

Additionally, knowing the signs and symptoms of heart attack and stroke, calling 911 immediately and getting to a hospital quickly are critical to survival.

It is important to note that people who have already had a heart attack or stroke can also work to reduce their risk of future events by controlling their risk factors. The more risk factors one has, the higher the risk of developing heart disease or stroke.

Controllable Risk Factors of Heart Disease and Stroke	Uncontrollable Risk Factors of Heart Disease and Stroke
Smoking High Blood Pressure High Blood Cholesterol Diabetes Being Overweight Physical Inactivity	Age Gender Race Family Medical History Previous Personal History of Heart Attack or Stroke

This plan outlines three specific goal areas:

- *Goal #1* is to increase awareness, prevention and detection of risk factors for heart disease and stroke prevention.
- *Goal #2* is to strive to improve statewide access and quality of pre-hospital care.
- *Goal #3* is to ensure those with cardiovascular disease receive quality care.

The overarching goal of the plan is to improve the quality of life, increase the years of healthy life, reduce the burden and eliminate disparities associated with heart disease and stroke. By focusing on the three goals in the Plan before an event (prevention), during an event (immediate medical care) and after an event (appropriate medical care and rehabilitation), South Dakotans can anticipate longer lives with an enhanced quality of life.



Photo Courtesy SD Tourism

OVERVIEW OF HEART DISEASE AND STROKE IN SOUTH DAKOTA

Cardiovascular disease is a broad term that includes heart attack, stroke, heart failure, hypertensive heart disease and diseases of the arteries, veins and circulatory system.

It is the leading cause of death for men and women in all race/ethnic groups in South Dakota and in the United States. The impact of cardiovascular disease is felt in many ways.

Rising healthcare costs associated with long-term illness and acute treatment affect the economic future of the state.

Perhaps the greatest impact is the life changes that occur with heart disease and stroke—an impact that can't be measured by numbers.

Heart disease is the state's leading cause of death, accounting for 1,743 or 24.8% of deaths in 2006.

Stroke is the third leading cause of death, accounting for 437 or 6.2% of the state's deaths (SD Vital Statistics Report, 2006).

In the coming years, the number of South Dakotans over the age of 65 will increase dramatically.

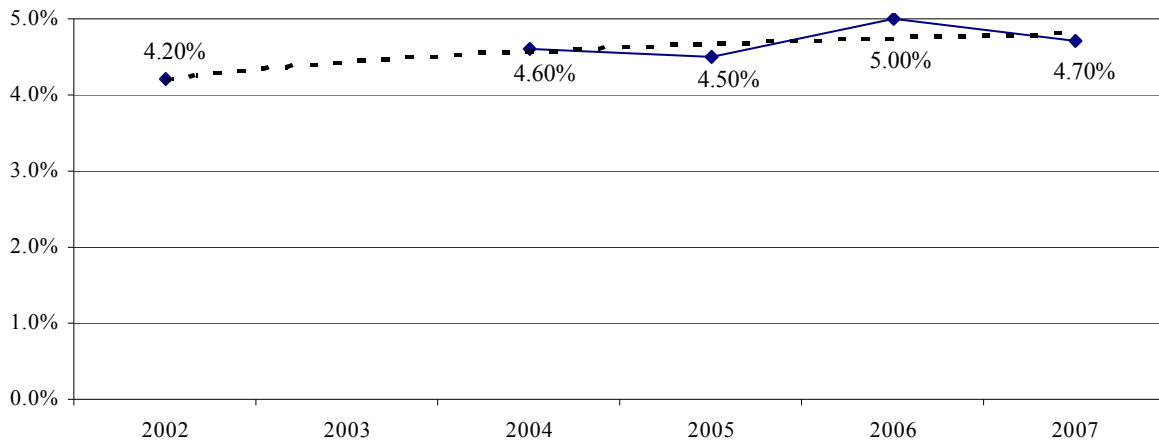
As our population increases and grows older, we can expect to see heart disease, stroke and the economic costs associated with treatment and rehabilitation also increase.

Never has the need for prevention and treatment of cardiovascular disease been greater.

Prevalence of Heart Disease and Stroke in South Dakota

In 2006, South Dakota reached an all time high of 5% of BRFSS respondents indicating that a health professional had told them they had previously had a heart attack or myocardial infarction, while in 2007 it dropped slightly to 4.7% (Figure 1).

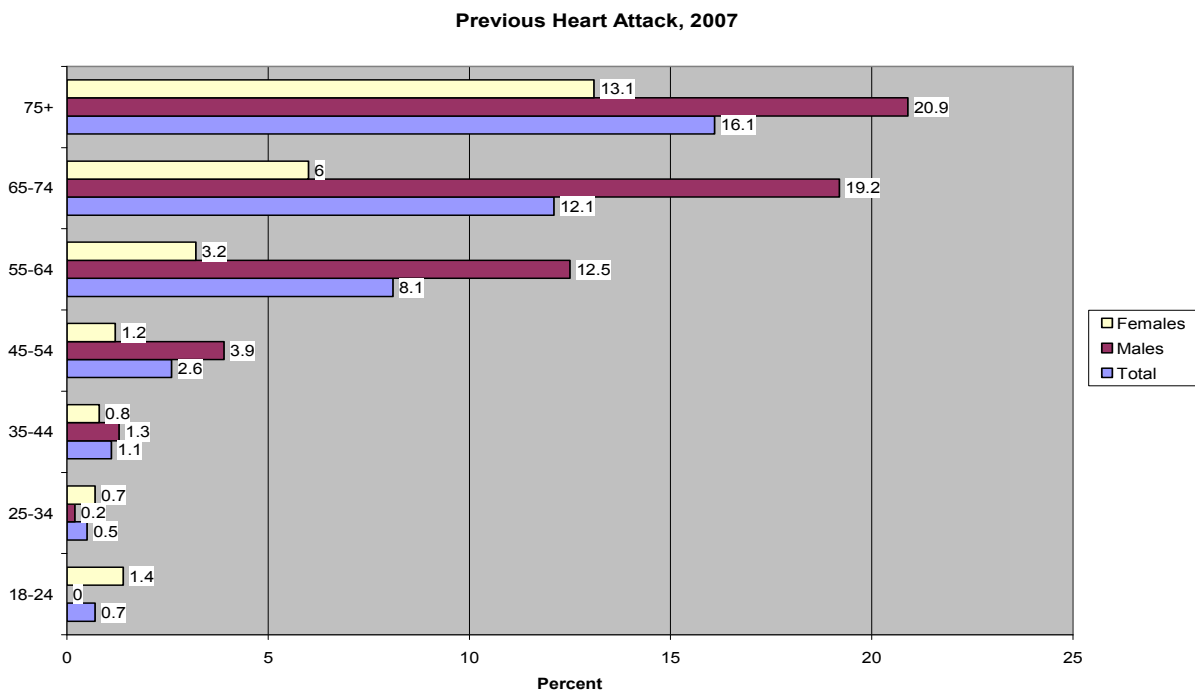
Figure 1
Percent of South Dakota Respondents Who Previously Had a Heart Attack



A significantly higher prevalence of males have been told they had a heart attack than females (6.1% vs. 3.3%). The prevalence of ever having a heart attack generally increases as age increases with a significant increase occurring as the 55-64 age group is reached.

This association is more evident in males (Figure2).

Figure 2
Percent of Respondents Who Previously Had a Heart Attack, by Age

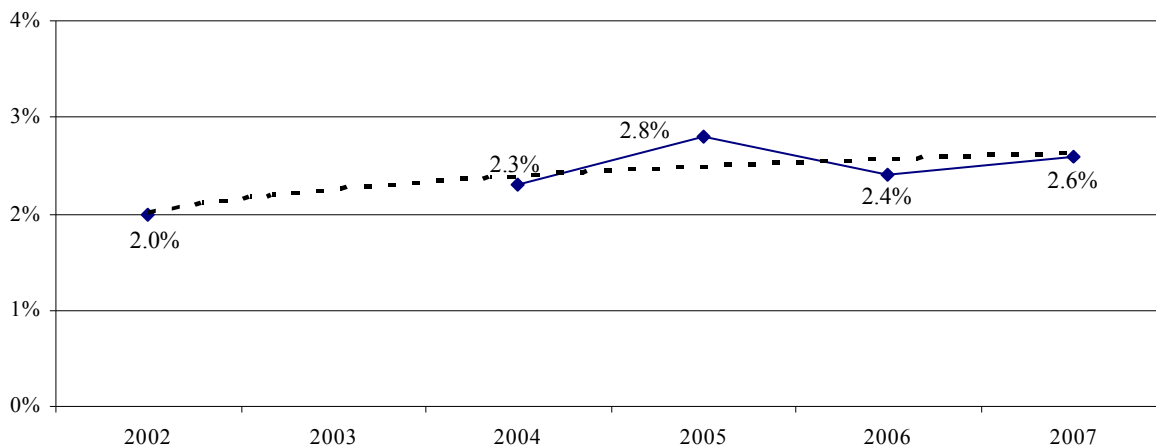


In 2007, 4% of BRFSS respondents indicated a doctor or other health professional told them that they have angina or coronary health disease. South Dakota's health disparities parallel the national picture as well.

American Indian women have a higher prevalence of a previous heart attack than white women (9.1% vs. 3%). A further concern is that few women perceive themselves to be at risk of heart disease when, in fact, more women die of heart disease than cancer and other diseases.

In that same year, 2.6% of BRFSS respondents indicated that a doctor, nurse, or other health professional told them they had a stroke (Figure 3).

Figure 3
Percent of SD Respondents Who Have Previously Had a Stroke

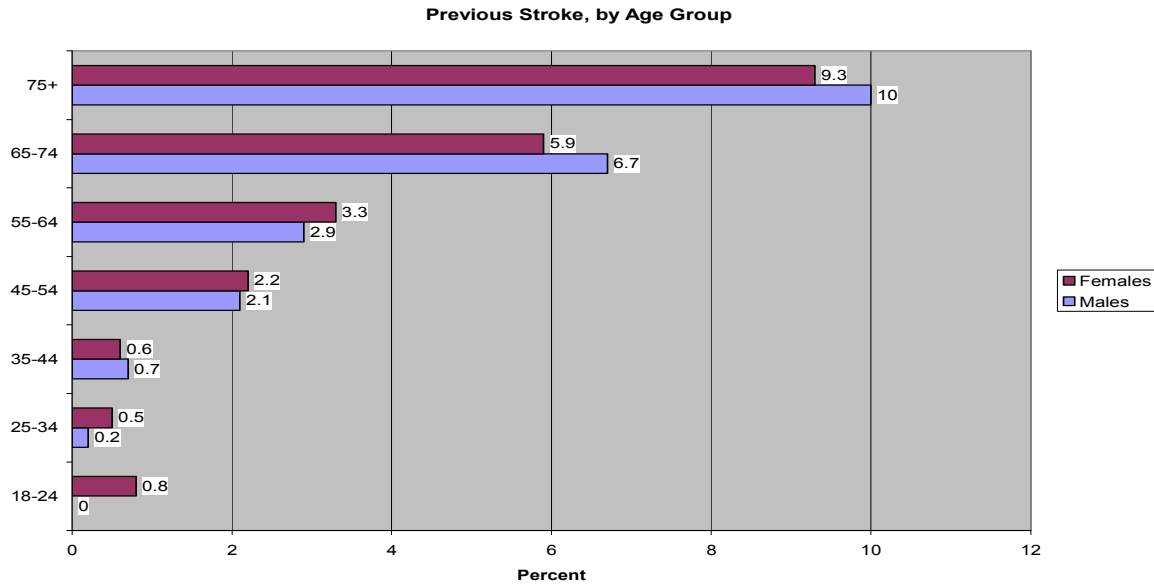


Source: Behavioral Risk Factor Surveillance System, SD Department of Health, 2002, 2004-2007

The prevalence of ever having had a stroke generally increases as age increases. This includes significant increases when the 45-54 and 65-74 age groups are reached.

This age association is more evident in males (Figure 4).

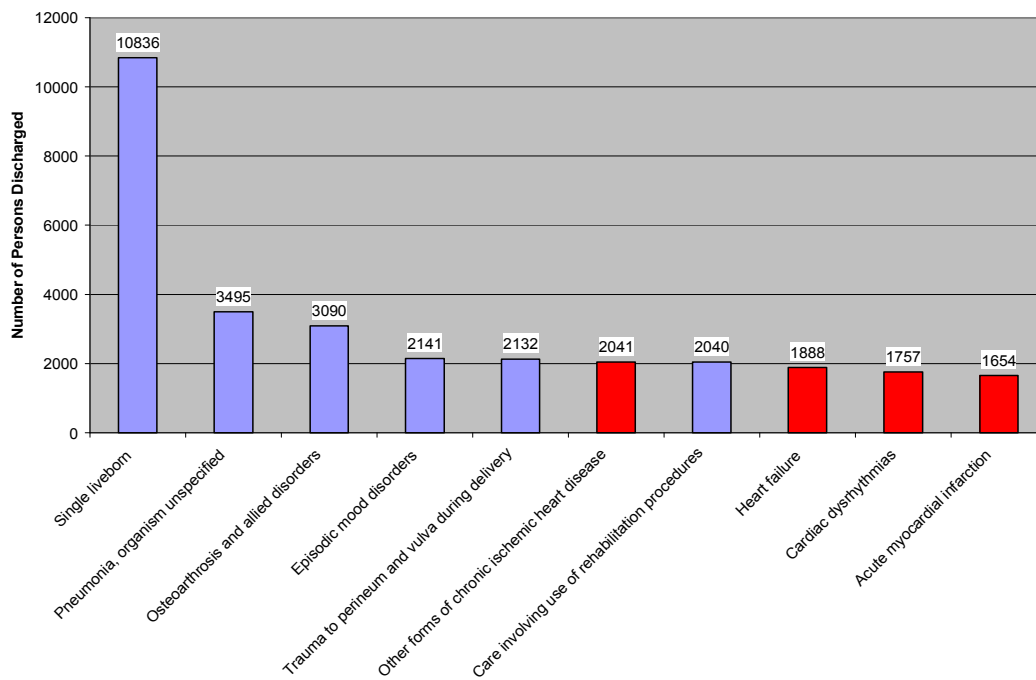
Figure 4
Percent of SD Respondents Who Have Previously Had a Stroke, by Age



South Dakota Hospitalizations for Heart Disease and Stroke

In 2007, four of the top ten hospital discharges were related to CVD (South Dakota Department of Health, 2007) (Figure 5). These data do not include Veterans Administration (VA) or Indian Health Service (I.H.S). hospitals.

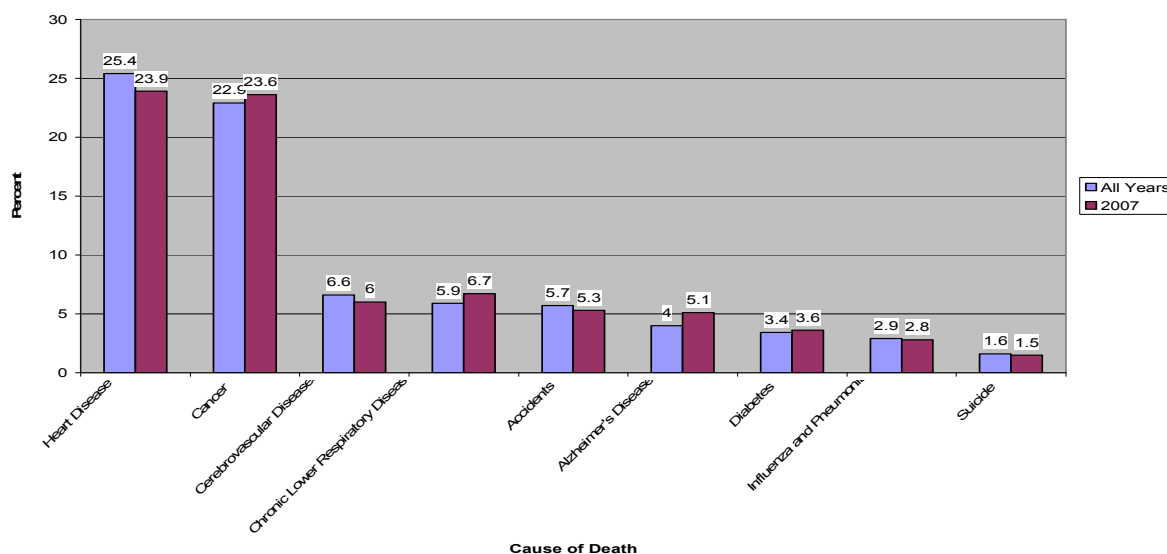
Figure 5
Top Ten Hospital Discharges in South Dakota in 2007



Mortality Rates from Heart Disease and Stroke in South Dakota

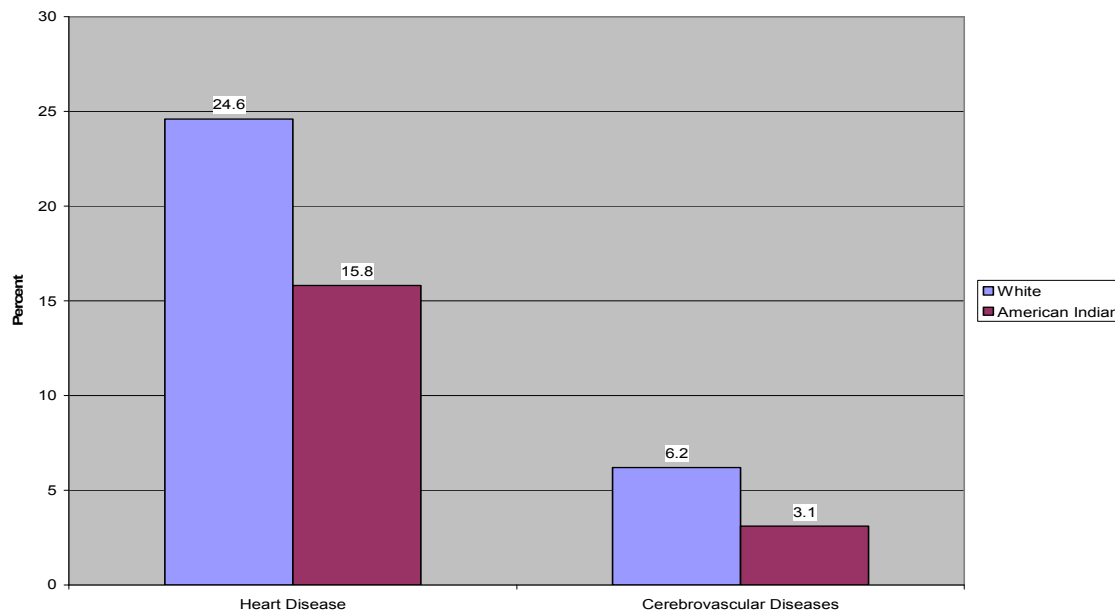
Heart disease is the number one cause of death in South Dakota. In 2007, 23.9% of deaths were related to heart disease. Six percent of all deaths in 2007 were the results of a stroke (Figure 6) (South Dakota Vital Statistics Report, 2007).

Figure 6
South Dakota Leading Causes of Death



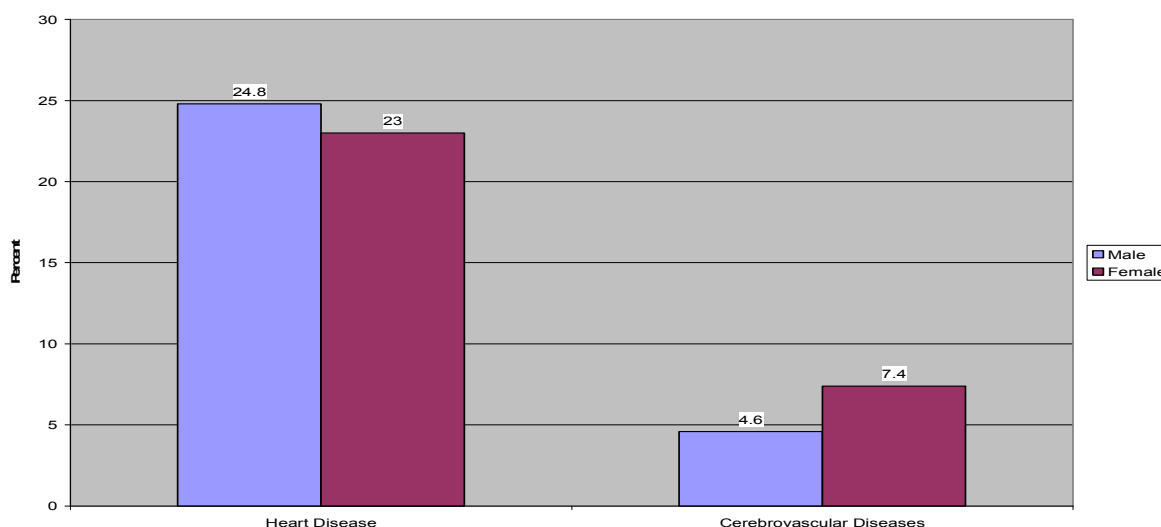
In 2007, mortality resulting from CVD is significantly higher among Whites than among the American Indian population (Figure 7).

Figure 7
Cardiovascular Disease Mortality by Race, 2007



Heart disease was the number one cause of death among men and women in South Dakota in 2007. Deaths resulting from stroke were significantly higher among females in 2007 than males (South Dakota Vital Statistics Report, 2007) (Figure 8).

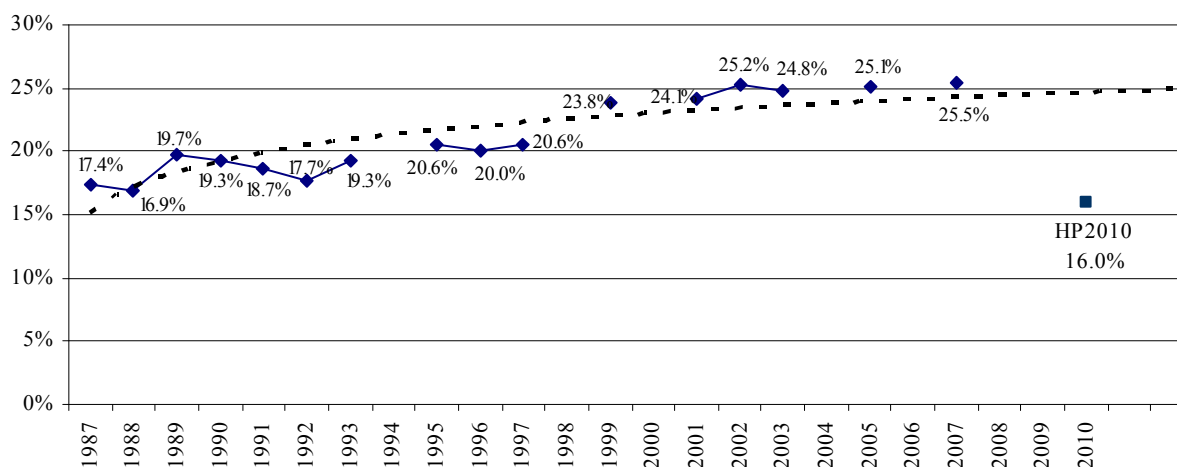
Figure 8
Cardiovascular Disease Mortality by Gender, 2007



Risk Factors for Cardiovascular Disease

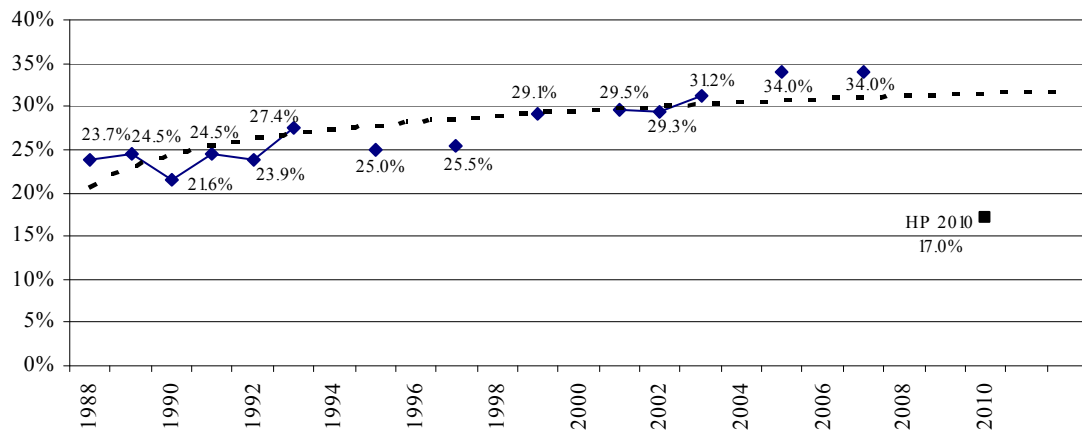
Hypertension—The prevalence of hypertension among South Dakotans has been increasing since the late 1980's (Figure 9). In 2007, 25.5% of BRFSS respondents reported having hypertension. South Dakota is slightly below the 2007 national average of 27.8%.

Figure 9
Prevalence of Hypertension Among SD Respondents



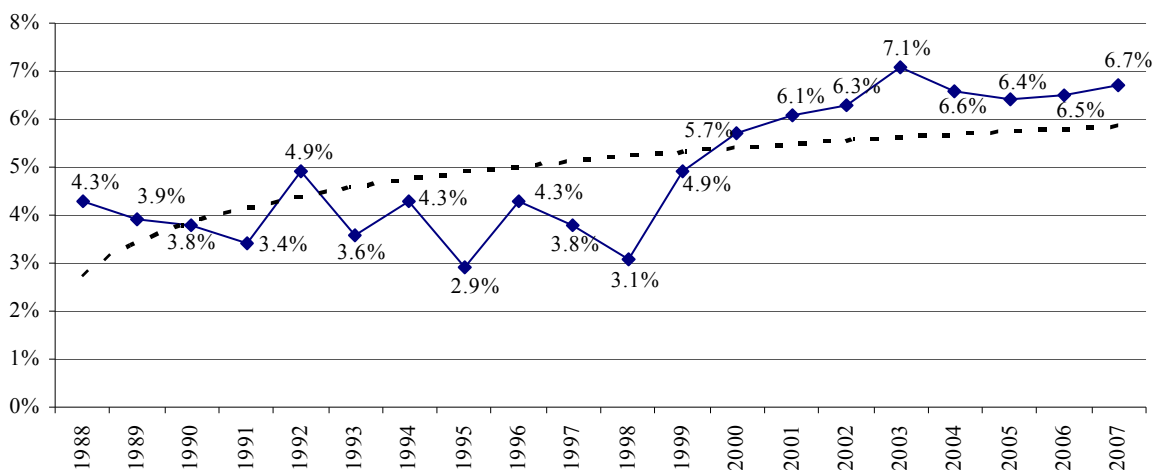
High Cholesterol—High blood cholesterol is also a risk factor for CVD. Again, the overall prevalence of high blood cholesterol has been increasing since the late 1980's (Figure 10). In 2007, 34% of South Dakotans reported having high blood cholesterol. South Dakota is slightly below the 2007 national average of 37.6%.

Figure 10
Prevalence of High Blood Cholesterol Among South Dakota Respondents



Diabetes—The prevalence of South Dakotans with diabetes has been increasing since the late 1980's (Figure 11). In 2007, 6.7% of South Dakotans reported having diabetes. South Dakota is below the national average of 8%. American Indians have a significantly higher prevalence of diabetes than whites (11% vs. 6.4%).

Figure 11
Prevalence of Diabetes Among SD Respondents



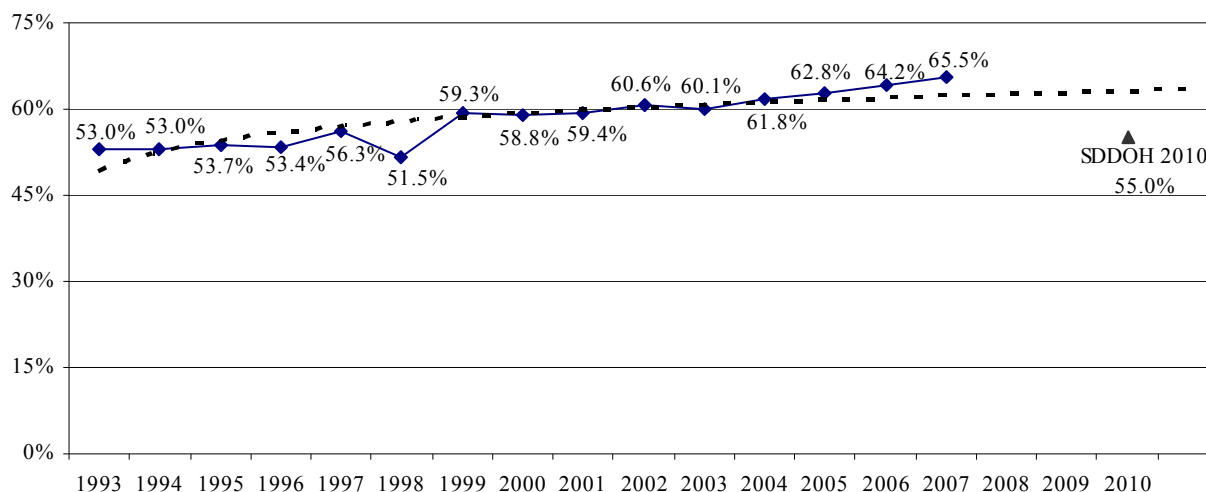
Tobacco Use—South Dakota had made progress in reducing risk factors that lead to cardiovascular disease. The prevalence of cigarette smoking declined significantly from its peak of 27.2% in 1998 to its current low of 19.8% in 2007 (SD BRFSS, 2007), which is equal to the national average of 19.8%. Use of spit tobacco among adult South Dakotans has also declined from 6.8% in 2003 to 5.8% in 2007.

Obesity—While there has been significant progress in decreasing tobacco use, the percentage of South Dakotans that are overweight/obese has increased dramatically over the past decade.

Obesity is defined as respondents who report having a Body Mass Index (BMI) of 30 or above. The percentage of South Dakotans classified as obese has been increasing over the past ten years. *Overweight* is defined as an excess of body weight but not necessarily body fat; a body mass index of 25 to 29.9 kg/m².

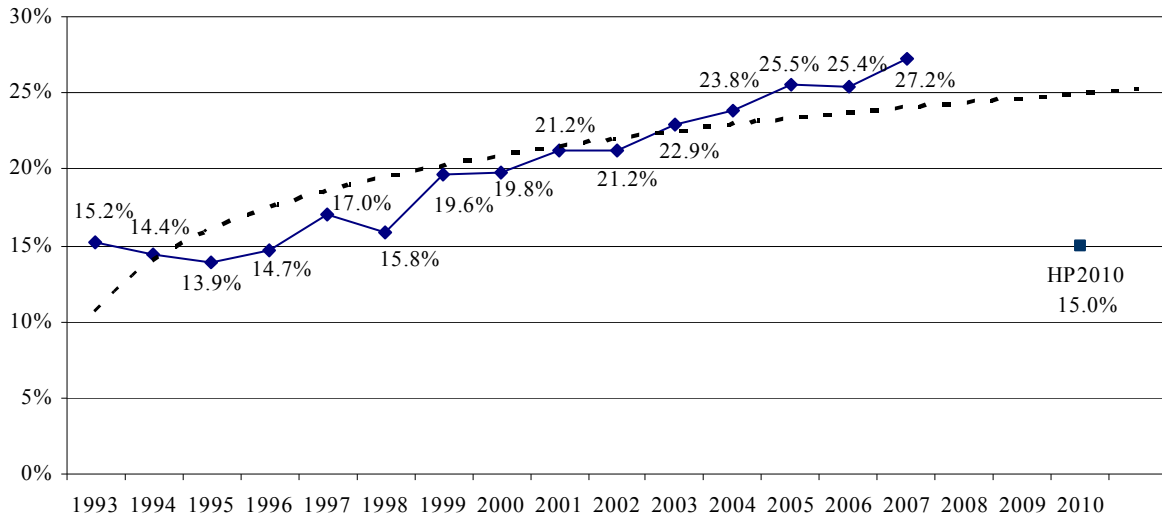
In 1994, 53% of South Dakotans were *overweight or obese*. By 2007, this figure rose to 65.5% (Figure 12). The problem of overweight/obesity is most prevalent among American Indians where 73.5% are overweight or obese. Nationally, 62.9% are overweight or obese.

Figure 12
Prevalence of Overweight/Obesity Among South Dakota Respondents



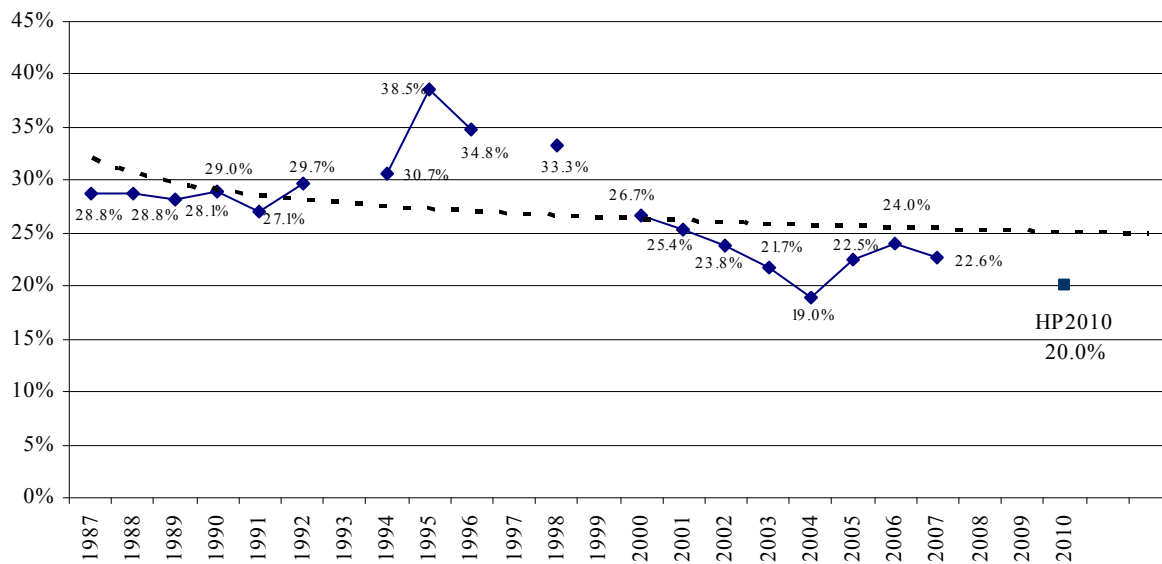
In 1998, 15.8% of South Dakotans were obese, where as in 2007, 27.2% were obese. American Indians (38.2%) have a much higher prevalence of obesity than whites (26.5). South Dakota is slightly above the nationwide median of 26.3%.

Figure 13
Percent of SD Respondents Who Are Obese Based on Body Mass Index



Approximately 23% (22.6%) of South Dakotans do not participate in any leisure-time physical activity (Figure 14). South Dakota mirrors the nationwide median of 22.6%.

Figure 14
Percent of SD Respondents Who Reported No Leisure Time Physical Activity

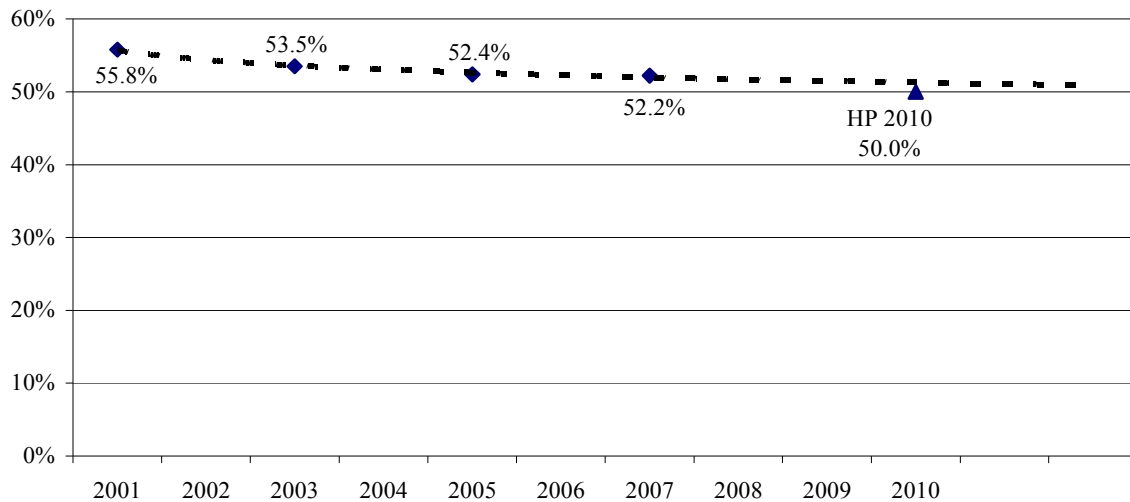




Over half (52.2%) of South Dakotans report doing less than 30 minutes per day of moderate physical activity or less than five days per week of moderate physical activity (Figure 15).

The nationwide median is 50.5%.

Figure 15
Percent of SD Respondents Who Reported No Moderate Physical Activity

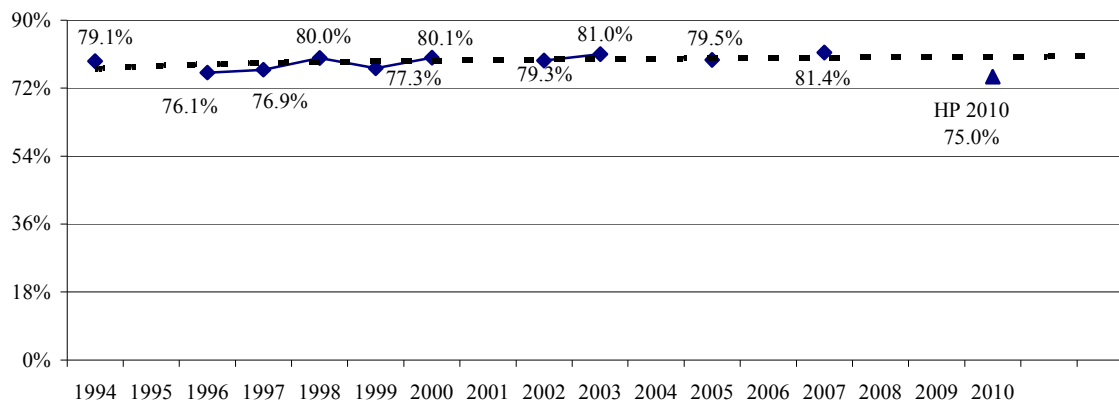


In 2007, 81.4% of South Dakotans reported consuming less than five servings of fruits and vegetables per day. Nationwide, the rate is somewhat lower at 75.6% (Figure 16).

Overall, from 1996 to 2003, the percent of respondents who did not consume at least five servings of fruits and vegetables had been increasing.

In 2005, there was a slight decrease; however in 2007 the percentage went back up. Males (84.8%) report not consuming at least five servings of fruits and vegetables than females (78.1%).

Figure 16
Percent of SD Respondents Who Reported Not Consuming at Least
Five Servings of Fruits and Vegetables Per Day



Summary

Cardiovascular disease remains the number one killer of South Dakota residents, accounting for 24.8% of all deaths in adults during 2006. Reducing risk factors and increasing awareness of signs and symptoms among all South Dakotans are the primary goals of the CVD State Plan.



References

- SD Dept of Health. (2005). Behavioral Risk Factor Surveillance System.
- SD Dept of Health. (2007). Behavioral Risk Factor Surveillance System.
- SD Dept of Health. (2007). Hospital Discharge Data.
- SD Dept of Health. (2007). South Dakota Vital Statistics Report: A state and county comparison of leading health indicators.

GOALS, STRATEGIES AND OBJECTIVES

The following are goals and strategies to address heart disease and stroke in South Dakota. As work progresses and more data becomes available to measure progress, some of the objectives listed below may change in scope.

Goal 1 – Increase awareness, prevention and detection of risk factors for heart disease and stroke events.

The majority of the key risk factors for heart disease and stroke events are lifestyle related. To stimulate behavior changes, it is critical to focus on a combination of education, policies and environmental issues that facilitate healthy decisions by individuals and communities.

Modifying risk factors such as high blood pressure, high cholesterol, tobacco use, excessive body weight, and physical inactivity offers the greatest potential for reducing morbidity and mortality from heart disease and stroke.

In addition to the specific objectives listed on the following pages, the *South Dakota State Plan for Heart Disease and Stroke* will support the initiatives found in the *South Dakota State Plan for Nutrition and Physical Activity*, the *South Dakota Diabetes State Plan* and the *South Dakota Department of Health Tobacco Control Program Strategic Plan*.

These plans can be found at www.doh.sd.gov.



Photo Courtesy SD Tourism

Objective 1 – Increase awareness of the signs and symptoms of heart attacks from 31% (CDC BRFSS 2005) to 50% by 2013. Healthy People 2010 goal is 40%

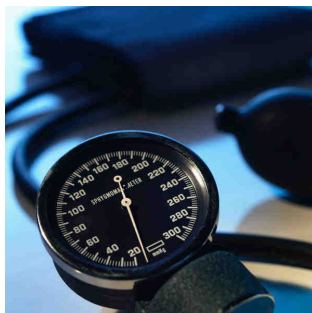
Strategies	Responsible Parties	Target Date
<p>1. Conduct a public awareness campaign on heart disease and the signs and symptoms of heart attack.</p> <p>Activity 1: Distribute promotional materials related to heart disease through partner networks.</p> <p>Activity 2: Distribute culturally appropriate, gender specific materials to targeted audiences as specified by identified partners.</p> <p>Activity 3: Develop a media campaign using a variety of media venues such as television, print, and radio.</p> <p>Activity 4: Post to and update information on partner websites.</p> <p>Activity 5: Distribute information through numerous networks.</p> <p>Activity 6: Engage South Dakota employers in providing policies, environmental conditions, programs, benefits and strategies that reduce the risk of heart disease among their employees.</p>	<p>AHA, SDDOH, AATCHB, SDNA, CHCs, SDAHO, SDSMA,, healthcare systems</p>	<p>Ongoing</p>
<p>2. Provide heart disease related resources for healthcare providers.</p> <p>Activity 1: Provide educational materials for healthcare providers.</p> <p>Activity 2: Publish a Special Edition of <i>SD Medicine</i> on heart disease and stroke in February 2011.</p> <p>Activity 3: Conduct Grand Rounds on heart disease topics.</p>	<p>IHS, AATCHB, SDNA, CHCs, SDSMA, SDAHO, SDDOH, healthcare systems</p>	<p>Ongoing</p>

Objective 2 - Increase awareness of signs and symptoms of stroke from 43.6% (CDC BRFSS 2005) to 50% by 2013.

Strategies	Responsible Parties	Target Date
<p>1. Conduct a public awareness campaign about signs and symptoms of stroke.</p> <p>Activity 1: Distribute Stroke Month promotional materials in the month of May.</p> <p>Activity 2: Distribute culturally appropriate, gender specific materials to targeted audiences through partners and their networks.</p> <p>Activity 3: Develop a media campaign using a variety of media venues such as television, print, and radio.</p> <p>Activity 4: Post to and update information on partner websites.</p> <p>Activity 5: Distribute information through numerous networks.</p> <p>Activity 6: Engage South Dakota employers in providing policies, environmental conditions, programs, benefits and strategies that reduce the risk of stroke among their employees.</p>	<p>AHA, AATCHB, SDDOH, SDAHO, SDSMA, healthcare systems</p>	<p>Ongoing</p>
<p>2. Provide stroke resources for healthcare providers.</p> <p>Activity 1: Provide educational materials to healthcare providers.</p> <p>Activity 2: Publish a Special Edition of <i>SD Medicine</i> on heart disease and stroke in February 2011.</p> <p>Activity 3 – Conduct Grand Rounds on stroke topics.</p>	<p>IHS, AATCHB, SDNA, Community Health Centers, SDSMA, SDAHO, SDDOH, healthcare systems</p>	<p>Ongoing</p>

Objective 3 – Among South Dakotans who report they have been told by a health professional that their blood pressure is high, decrease prevalence from 25.5% (BRFSS, 2007) to 25% by 2013.

Strategies	Responsible Parties	Target Date
<p>1. Support Department of Health programs to increase blood pressure screening.</p> <p>Activity 1: Promote program activities and advocate for funding.</p>	IHS, AHA, SDNA, CHAD, SDSMA	June 2013
<p>2. Promote healthcare facility screening and education programs.</p>	CHCs, SDAHO, healthcare systems	Ongoing
<p>3. Promote education, public awareness, and control of blood pressure.</p> <p>Activity 1: Distribute promotional materials related to control of high blood pressure.</p> <p>Activity 2: Post to and update information on partner websites.</p> <p>Activity 3: Distribute information through numerous networks.</p> <p>Activity 4: Encourage South Dakota employers to offer blood pressure screenings as a part of preventative health for employees.</p>	AHA, AATCHB, SDDOH, SDAHO, SDSMA, healthcare systems	September 2009
<p>4. Provide blood pressure resources for healthcare professionals.</p> <p>Activity 1: Provide current information, treatment guidelines and research on blood pressure protocols.</p> <p>Activity 2: Provide patient educational materials.</p>	IHS, SDNA, SDSMA, SDDOH, healthcare systems	June 2013



Objective 4 – Among South Dakotans who report they were told by a health professional they have high cholesterol, decrease prevalence from 34% (BRFSS, 2007) to 32% by 2013.

Strategies	Responsible Parties	Target Date
<p>1. Support the SD Department of Health programs to increase cholesterol screening.</p> <p>Activity 1: Promote program activities and advocate for funding.</p>	<p>IHS, AHA, SDNA, CHAD, SDSMA</p>	<p>June 2013</p>
<p>2. Promote healthcare facility screening and education programs.</p>	<p>CHCs, SDAHO, healthcare systems</p>	<p>September 2009</p>
<p>3. Promote education, public awareness, and control of high cholesterol.</p> <p>Activity 1: Distribute promotional materials related to control of high cholesterol.</p> <p>Activity 2: Post and update information on partner websites.</p> <p>Activity 3: Distribute information through numerous networks.</p> <p>Activity 4: Encourage South Dakota employers to offer cholesterol screenings as a part of preventative health for employees.</p>	<p>AHA, AATCHB, SDDOH, SDAHO, SDSMA, healthcare systems</p>	<p>September 2009</p>
<p>4. Provide cholesterol resources for healthcare professionals.</p> <p>Activity 1: Provide current information, treatment guidelines and research on high cholesterol protocols.</p> <p>Activity 2: Provide patient education materials.</p>	<p>IHS, SDNA, SDSMA, SDDOH, healthcare systems</p>	<p>September 2009</p>

Goal 2 – Strive to improve statewide access and quality of pre-hospital care.

Heart disease, particularly ST-Elevated Myocardial Infarction (STEMI), and stroke are serious diseases that require urgent medical care. Properly recognizing the signs and symptoms of heart attack and stroke and acting immediately by calling 9-1-1 saves lives.

South Dakota is a sparsely populated state, with the majority of the state's population clustered around a few communities, resulting in a larger number of rural communities across the state.

Because of the low population density within many areas of South Dakota, Emergency Medical Services (EMS) response times differ by place of residence.

It only takes 4 minutes for the body to sustain brain damage without oxygen. Thus it is essential to have a coordinated EMS plan to deliver patients to the most appropriate hospital in a timely manner.

This plan seeks to develop a universal 911 dispatch system and standardized measures for pre-hospital care.

Objective 1 – Implement a statewide, standardized template with universal data elements for pre-hospital patient delivery system by 2013.



Strategies	Responsible Parties	Target Date
<p>1. Develop the standardized elements of pre-hospital care measures.</p> <p>Activity 1: Identified pre-hospital workgroup will come together to review current measures utilized and identify a standardized set of guidelines for South Dakota.</p> <p>Activity 2: Legal representation/review will be provided on the template implementation.</p>	<p>SD Public Safety, DOH-Rural Health, EMS, SDSMA</p> <p>Legal counsel to be determined</p>	January 2010
<p>2. Promote South Dakota standardized measures to EMS statewide.</p> <p>Activity 1: Provide education and advocacy to EMS through monthly training and statewide conferences.</p>	<p>SD Public Safety (EMS), healthcare systems, SD DOH-Office of Rural Health, SDEMTA, SDSMA</p>	January 2010

Objective 2 – In collaboration with the 911 Coordination Board, implement a statewide universal medical priority dispatch system by 2013.

Strategies	Responsible Parties	Target Date
<p>1. Work with the 911 Coordination Board to advocate for a universal dispatch system.</p> <p>Activity 1: Invite a member of the 911 Coordination Board to join the SD Heart Disease and Stroke Board workgroup.</p> <p>Activity 2: Promote a statewide medical priority dispatch system with the 911 Coordination Board.</p> <p>Activity 3: Educate medical dispatchers about a universal medical priority dispatch system</p>	SD Public Safety, AHA, healthcare systems	January 2010

Objective 3 - Increase the number of EMS providers using 12-lead EKG from 40% to 60% by 2013.

Strategies	Responsible Parties	Target Date
<p>1. Advocate for resources for rural EMS services to acquire 12-lead EKG equipment.</p> <p>Activity 1: Seek grant fund opportunities for rural services.</p> <p>Activity 2: Provide technology for rural hospitals to receive 12-lead EKG information.</p>	AHA, SD Public Safety (EMS), SD DOH-Rural Health, SDSMA, ACEP, AAFP, healthcare systems	November 2010
<p>2. Provide statewide training on 12-lead EKG.</p> <p>Activity 1: Advocate through EMS for training modules to include 12-lead EKG.</p>	SD Public Safety, healthcare systems	November 2009

Objective 4 - By 2013, provide STEMI and Non-STEMI education to 100% of EMS services at a minimum of every two years.

Strategies	Responsible Parties	Target Date
1. Provide statewide training on 12-lead EKG. Activity 1: Advocate through EMS for training modules to include 12-lead EKG.	SD Public Safety, healthcare systems	November 2009
2. Provide basic cardiovascular education for STEMI and Non-STEMI, including basic pathophysiology, signs and symptoms, basic diagnostic pathways, and standard treatment options. Activity 1: Recommend standardized STEMI and Non-STEMI care guideline resources.	SD Public Safety, healthcare systems	January 2010
3. Provide electives related to stroke under EMS continuing education. Activity 1: Consider web-based/ DVD modules for stroke identification and care.	SD Public Safety, AHA	January 2010



Objective 5 - By 2013, provide stroke education to 100% of EMS services at a minimum of every two years.

Strategies	Responsible Parties	Target Date
1. Provide stroke scale standards to all local EMS services. Activity 1: Recommend standardized stroke care guideline resources.	SDDOH- Rural Health, healthcare systems	November 2009
2. Provide electives related to stroke under EMS continuing education. Activity 1: Consider web-based/ DVD modules for stroke identification and care.	SD Public Safety, AHA	January 2010

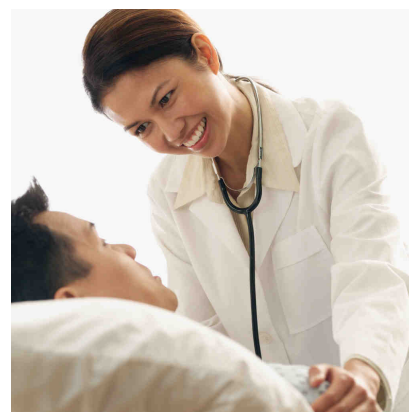
Goal 3 - Ensure that those with cardiovascular disease receive quality care.

Cardiovascular disease (CVD) includes all diseases of the heart and blood vessels, such as coronary heart disease, stroke, congestive heart failure, hypertensive disease and atherosclerosis.

According to the Centers for Disease Control, 1 of every 5 U.S. residents currently has one or more forms of CVD. The American Heart Association/American Stroke Association adds that coronary heart disease and stroke are the number one and three killers of men and women, and both are leading causes of serious, long-term disability in the United States.

Living with CVD has serious implications on quality of life and creates an economic burden on patients and families, as well as on employers, insurance companies, the government, and the healthcare system.

The objectives outlined here are designed to ensure that healthcare professionals have access to the latest scientific guidelines for cardiovascular care and that patients receive current, easy-to-understand information about their condition.



A focus on quality of care ensures that patients receive appropriate treatment to prevent the progression of disease, subsequent events, associated complications, disabilities and mortality.

Objective 1 - 100% of healthcare facilities will have access to the CMS Standards of Care for cardiovascular and cerebrovascular care by January 1, 2010 (6 months after system plan implementation).

Strategies	Responsible Parties	Target Date
1. Provide and promote CMS standards of cardiovascular care. Activity 1: Provide a link to the CMS website for standards.	SD Heart Disease and Stroke Advisory Board	January 2010
2. Provide and promote CMS standards for cerebrovascular care. Activity 1: Provide a link to the CMS website for standards.	SD Heart Disease and Stroke Advisory Board	January 2010

Objective 2 – Develop coordinated systems of care for heart disease and stroke by 2013.

Strategies	Responsible Parties	Target Date
1. MI systems of care: standardize protocols for STEMI and provide necessary resources and training. Activity 1: Identify a task force to provide guidance and input on standardized protocols.	SD Heart Disease and Stroke Advisory Board	July 2009
2. Stroke systems of care: standardize acute emergent stroke protocol and provide necessary resources and training. Activity 1: Identify a task force to provide guidance and input to accomplish stroke protocols.	SD Heart Disease and Stroke Advisory Board	September 2009
3. Identify the need for further systems of care, heart failure, and PVD.	SD Heart Disease and Stroke Advisory Board	June 2011

Objective 3 – 100% of health care facilities will have access to patient resources.

Strategies	Responsible Parties	Target Date
<p>1. Develop a standardized patient discharge packet.</p> <p>Activity 1: A sub-committee will draft a proposal packet for review by the SD Heart Disease and Stroke Advisory Board.</p> <p>Activity 2: Identify, provide and promote additional disease-specific educational resources.</p> <p>Activity 3: Edit, approve, and distribute the packet.</p>	SD Heart Disease and Stroke Advisory Board	October 2009



APPENDICES

Appendix A -Glossary

Appendix B—List of Plan Participants

Appendix A — Glossary

Acute Myocardial Infarction - See Heart Attack.

AAFP - American Academy of Family Physicians

AATCHB - Aberdeen Area Tribal Chairmen's Health Board

ACEP - American College of Emergency Physicians

AHA - American Heart Association

Angina - Narrowing of the blood vessels to the coronary artery causes temporary discomfort or pain when the heart cannot receive enough blood. Angina usually occurs when the heart is working harder than normal, usually during exercise or a time of stress. This temporary discomfort can be a dull ache, pressure, squeezing or heaviness in the chest. The pain or discomfort sometimes moves down the arms, up the neck and jaw or into the back.

Atherosclerosis - A condition that results from the gradual build-up of fatty substances, including cholesterol, on the walls of the arteries. This build-up, called plaque, reduces the blood flow to the heart, brain and other tissues and can cause a heart attack or stroke. This process is commonly referred to as hardening of the arteries.

Behavioral Risk Factor Surveillance System (BRFSS) - The Behavioral Risk Factor Surveillance System (BRFSS) is a random digit-dialed telephone survey of a sample of non-institutionalized adults (age 18 years and older) conducted annually in all 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands, in collaboration with the Centers for Disease Control and Prevention (CDC). The BRFSS survey includes questions on a wide variety of health-related topics, including diabetes, tobacco and alcohol use, physical activity, diet, weight control, health insurance, and the use of preventive and other health care services. The South Dakota Department of Health is the lead agency for the statewide BRFSS survey.

Body Mass Index (BMI) - A measurement of human body size and proportion defined as the weight in kilograms divided by the square of height in meters.

Blood Cholesterol - Cholesterol is made in the liver and absorbed from the food we eat. Cholesterol is used by all parts of the body and is transported around the body in the blood. A high level of blood cholesterol leads to atherosclerosis and an increased risk of heart disease.

Blood Pressure - Blood pressure measures the force with which blood travels through blood vessels. A blood pressure reading comprises two numbers. The higher number is the systolic pressure – this pressure is generated when the heart actually pumps blood. The lower number measures the pressure when the heart rests. Blood pressure numbers typically start to rise when artery walls thicken, constrict, or lose their elasticity, which makes it harder for blood to push through them. When arteries become too narrow, it typically results in high blood pressure.

Cardiovascular Disease (CVD) - The term cardiovascular disease (CVD) refers to a wide range of disorders affecting the heart and blood vessels. A leading cause of CVD is atherosclerosis, a general term for the narrowing and hardening of the arteries. CVD can be sub-divided into the following diseases:

- coronary heart disease (CHD)
- coronary artery disease (CAD)
- cerebrovascular disease (CBVD)
- peripheral vascular disease (PVD)

Cerebrovascular Disease (CBVD) - CBVD encompasses stroke, which is injury or death to parts of the brain caused by an extended or permanent interruption in the blood supply to that area, and transient ischemic attacks, which are temporary impairments to vision, speech, sensation or movement caused by a brief interruption in the blood supply to the brain.

CHAD - Community Healthcare Association of the Dakotas

CHCs - Community Health Centers

Cholesterol - A fatty substance that occurs naturally in the body and is necessary for hormone production, cell metabolism and other vital processes. Cholesterol is also found in many of the processed foods that we eat. High levels of blood cholesterol are a contributing factor to coronary artery disease.

Co-morbidity - Two or more diseases or conditions existing together in an individual.

Coronary Artery Disease (CAD) - A condition in which the arteries that service the heart are narrowed by LDL-deposited plaques. When an artery becomes blocked and blood flow is impeded, the heart muscle is deprived of oxygen. Blocked bloodflow can cause chest pain (also called angina) and/or heart attack. High levels of LDL cholesterol can indicate heart disease.

Coronary Heart Disease (CHD) - See Coronary Artery Disease.

Healthcare Systems - Hospitals, clinics, home health, long-term care, and cardiac rehabilitation

Healthy People 2010 Initiative (HP 2010) – Healthy People 2010 is a set of health objectives for the Nation to achieve over the first decade of the new century. It is used by states, communities, professional organizations, and others to help them develop programs to improve health.

Heart Disease - See Coronary Artery Disease.

Heart Attack - When a part of the heart muscle dies because blood flow is interrupted, a heart attack can occur. Symptoms may include nausea, shortness of breath and pain in the chest, arm or neck. Also called “myocardial infarction.”

Hospital Discharge Data - Beginning in 2005, data has been collected from all community hospitals within South Dakota, with the exception of IHS and the VA. Data fields include: age, sex, race, location, length of stay, discharge status, principle/secondary diagnoses, as well as principle / secondary procedures.

Hypercholesterolemia - Medical name for high levels of cholesterol in the blood.

Hypertension - High blood pressure. See Blood Pressure.

IHS - Indian Health Service

Incidence - The rate at which a certain event occurs (i.e., the number of new cases of a specific disease occurring during a certain period).

Myocardial Infarction - See Heart Attack .

Obesity - The condition of having an abnormally high proportion of body fat. Defined as a body mass index (BMI) of greater than or equal to 30. Subjects are generally classified as obese when body fat content exceeds 30 percent in women and 25 percent in men. The operational definition of obesity in this document is a BMI ≥ 30 .

Overweight - An excess of body weight but not necessarily body fat; a body mass index of 25 to 29.9 kg/m².

Peripheral Vascular Disease (PVD) - Peripheral vascular disease (PVD) refers to diseases of the blood vessels (arteries and veins) located outside the heart and brain. While there are many causes of peripheral vascular disease, doctors commonly use the term peripheral vascular disease to refer to peripheral artery disease (peripheral arterial disease, PAD), a condition that develops when the arteries that supply blood to the internal organs, arms, and legs become completely or partially blocked as a result of atherosclerosis.

Prevalence - The number of events, e.g., instances of a given disease or other condition, in a given population at a designated time. When used without qualification, the term usually refers to the situation at specific point in time (point prevalence). Prevalence is a number, not a rate.

Risk Factor - A risk factor is an attribute which is positively associated with the development of a disease but is not sufficient to cause the disease. The generally accepted risk factors for cardiovascular disease are smoking, high blood pressure, high cholesterol, diabetes, obesity/sedentary lifestyle, alcohol, stress, age and socio-economic status.

SDAHO - South Dakota Association of Health Organizations

SDDOH - South Dakota Department of Health

SDDOH – Rural Health - South Dakota Department of Health's Office of Rural Health

SDEMTA - South Dakota Emergency Technicians Association

SD Heart Disease and Stroke Advisory Board -Cross-section of health professionals and others from across South Dakota who meet regularly to discuss needs associated with heart disease and strokes

SDNA - South Dakota Nurses Association

SD Public Safety - South Dakota Department of Public Safety

SDSMA - South Dakota State Medical Association

South Dakota Vital Statistics Report - The South Dakota Vital Statistics Report compiles state and county data related to natality, infant mortality, mortality, induced abortion, marriage and divorce, communicable disease, health status profiles, and health status maps.

Stroke - Occurs when blood vessels in the brain either become clogged or burst, killing vital tissue. A stroke can result in temporary or permanent disabilities including paralysis and a variety of sensory impairments.

Appendix B — South Dakota Heart Disease and Stroke State Plan Participants

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